**Summary:**

I am working on US census demographic data of the year 2015, hoping to find different correlations between various attributes with effective use of Graphs and other methods.

I include below two Sheets and one dashboard I made.

**Design:**

I want to use as much as different types of Graphs for this project (which is also a compulsion as rubrics stated),

For the 1st Insight, I used maps with color bar filters to show the transition of correlations; for 2nd Insight, I used a bar chart. In this, there are many colors involved; thus, I used the Colorblind palette recognizing the problem of colorblind people.

For the 3rd Insight, I was about to use two line charts, but the map best suited me in this area.

I tried to maintain the Data-Ink Ratio and provide my best not to produce any Junk.

**US Population Distribution Overview:**

<https://public.tableau.com/profile/alok.gupta3847#!/vizhome/Data_dashboard1_15904411075920/Dashboard1?publish=yes>

My First Task asks explicitly two questions regarding poverty and income in the states:

* 1. **Construction experience vs. debt:** In this, I have to find out do counties with more construction experience more or less poverty?

For this, I create a calculated field in which I find the correlation between Construction and poverty Attribute using CORR function and made a map, In which I found **that around 60 % of states show a positive relationship. In contrast, rest shows negative**, which only concludes that **in most cases, states with more construction experience have more poverty.**

* 1. **Coast vs. Income:** In this, I must find out whether counties near the coast experience more or less income? To do this, I create a calculated field in which I find the correlation between Pacific and Income per capita Attribute using CORR function and made a map.

I found **that no. of states with a positive relationship are almost equal to those of states with a negative correlation**; thus, we can say that **half of the states near the coast have high income and half have low income.**

I combine these two Maps in a dashboard for better understanding.

**States having Best Transportation:**

<https://public.tableau.com/profile/alok.gupta3847#!/vizhome/Data_dashboard1_15904411075920/Sheet3?publish=yes>

My 2nd Task is to find **which states have the best transportation in** the US; for that to answer, I must find out what people commonly used for commuting. In the data, there are five methods of commute available i.e.

* Drive - driving their vehicles.
* Carpool - sharing the vehicles.
* Walk - walking as a commute

• Transit - Using public Transports.

* Other Transp - Other ways of transport.

By making a Bar chart between these attributes and various states, I found out **Driving their vehicles is most people like, this is the best means of transport.**

Yet I must find out the Average commute time in various states, which I found using the same Graph.

Finally, for the states with the best transportation, I filter out the states who have average drive time above 70 minutes and mean commute time less than 20 minutes; thus, I found out:

**Iowa, Kansas, Nebraska, New Mexico, North Dakota, South Dakota, Oregon, Utah, and Wyoming have the best transportation.**

**Richest and Poorest State:**

[https://public.tableau.com/profile/alok.gupta3847#!/vizhome/Data\_dashboard1/Sheet4?publish=yes](https://public.tableau.com/profile/alok.gupta3847?publish=yes#!/vizhome/Data_dashboard1/Sheet4)

In my 3rd Task I want to find out **in which states People are earning more than Average and where people are less than Average, respectively.**

For this, I made an Area Chart using Average Income per capita and the various states included. But I should also consider the total Income per capita error in that state (which should be low, so it does not affect much on net Avg. Income), so I also included this attribute in this Area chart.

Finally, after inspecting the Graph I found out

• **District of Columbia is the wealthiest state**, having Avg Income of $47,675 with a total error of $568.

• **Puerto Rico is the** most impoverished state with an average income of $9,618, with an absolute error of $53,518.

**Resources:**  N/A